

WHAT IS CLAIMED IS:

1. An optical interconnection circuit among wavelength multiplexing chips comprising:
 - a substrate,
 - a micro-tile shaped elements disposed on the substrate having a light emitting function or a light receiving function with wavelength selectivity.
2. The optical interconnection circuit among wavelength multiplexing chips according to Claim 1, further comprising:
 - optical waveguides disposed on the substrate and optically connected to the micro-tile shaped elements.
3. The optical interconnection circuit among wavelength multiplexing chips according to Claim 2,
 - the optical waveguides including branches and being made of resin.
4. The optical interconnection circuit among wavelength multiplexing chips according to Claim 2,
 - the micro-tile shaped elements having the light emitting function being optically connected to one of the optical waveguides, and
 - the micro-tile shaped elements with the light emitting function having different emitted light wavelengths.
5. The optical interconnection circuit among wavelength multiplexing chips according to Claim 4,
 - the micro-tile shaped elements having the light emitting function simultaneously inputting optical pulse signals having a plurality of emitted light wavelengths to one of the optical waveguides.
6. The optical interconnection circuit among wavelength multiplexing chips according to Claim 2,
 - the micro-tile shaped elements having the light receiving function being optically connected to one of the optical waveguides, and
 - the micro-tile shaped elements with the light receiving function having different received light wavelengths.
7. The optical interconnection circuit among wavelength multiplexing chips according to Claim 1, integrated circuit chips being mounted on the substrate, and
 - the integrated circuit chips and the micro-tile shaped elements being electrically connected to each other by wiring lines on the substrate.

8. The optical interconnection circuit among wavelength multiplexing chips according to Claim 7, the integrated circuit chips being mounted on the substrate by a flip-chip technique.

9. The optical interconnection circuit among wavelength multiplexing chips according to Claim 7,
the substrate being a constituent of a flat panel display,
at least timing-control integrated circuits and driver integrated circuits being mounted on the substrate as the integrated circuit chips, and
the optical waveguides being disposed to connect the timing-control integrated circuits to the driver integrated circuits.

10. The optical interconnection circuit among wavelength multiplexing chips according to Claim 9,
the driver integrated circuits being mounted on the substrate, and
each of the driver integrated circuits including a branch in the optical waveguide.

11. The optical interconnection circuit among wavelength multiplexing chips according to Claim 9, the timing-control integrated circuits including the micro-tile shaped elements having the light emitting function, and
the micro-tile shaped elements having the light emitting function emit light components having different wavelengths and being optically connected to common optical waveguides.

12. The optical interconnection circuit among wavelength multiplexing chips according to Claim 10, the driver integrated circuits including the micro-tile shaped elements having different received light wavelengths.

13. An electro-optical device, comprising:
the optical interconnection circuit among the wavelength multiplexing chips according to Claim 1.

14. An electronic apparatus, comprising:
the optical interconnection circuit among the wavelength multiplexing chips according to Claim 1.